



SAF-FRO

DIGI@WAVE/DIGI@PULS automation

Enter the new era for automatic and robotic welding.

Aim for high digital precision



DIGI@WAVE and DIGI@PULS automation

DIGI@PULS and DIGI@WAVE machines are designed as the perfect solution to the most demanding automatic or robotic applications. The three different automatic levels A1, A2 and A3 allow these machines to communicate with a simple automatic machine, a more sophisticated machine or robots equipped with wire or (can) bus communication devices. Complementary options enable saving of data onto USB keys and laptop PCs, networking of machines, control of additional peripheral equipment or retrofitting onto machines or robots.



1509-008



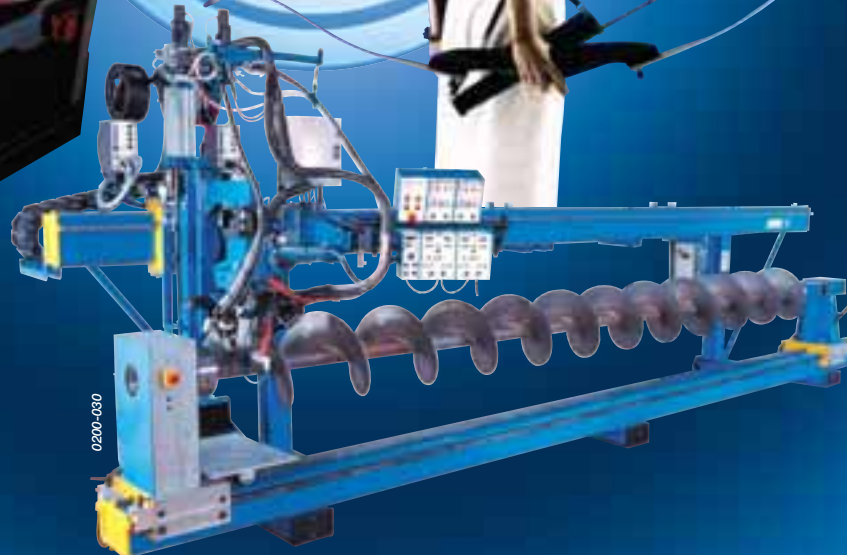
2223-001



2001-064



2006-127



0200-030

Automation A1

A1 automation level is standard on both DIGI@PULS and DIGI@WAVE machines. It allows direct communication to a machine or a robot. Specific wire feeders for automatic applications are recommended but a manual wire feeder can also be used. This automation level does not require an optional automation card.

DIGI@PULS machines 320 - 420



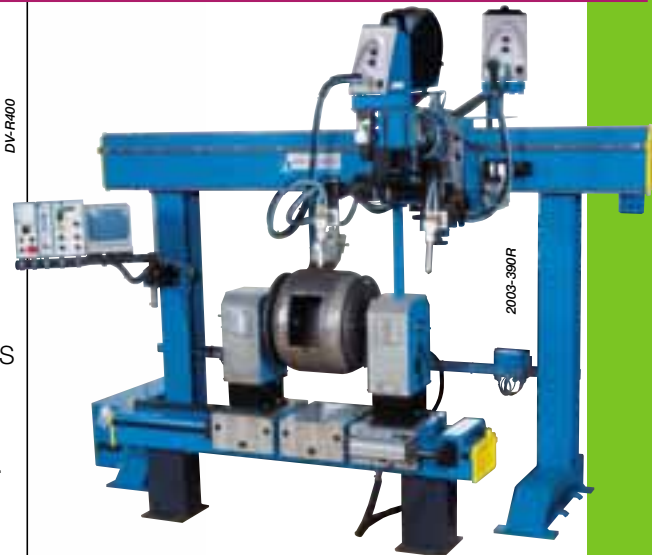
DV-R 400 CDR automatic wire feeder

A1 automation level with DIGI@PULS allows the operation of the DIGI@PULS with either a machine or a robot. The machine interface can control wire speed or voltage input or call on and chain one of the 10 programs in the DIGI@PULS memory. In this case it is mandatory to use the remote control and power source plug to allow the storing of 10 process programs. DV 400 CDR standard manual wire feeder can be used on a machine but the automatic DV-R 400 wire feeder is recommended especially for robots.

** Programs only with RC-JOB option.*

Features AUTO A1

- Easy interfacing
- Control of welding parameters by 0-10V input signal
- "Chain" program facility *



Auto A1 with DV 400 CDR manual feeder onto an automatic machine

DIGI@WAVE machines 400 - 500



DV-500 CDR automatic wire feeder

A1 automation level with DIGI@WAVE allows the operation of the DIGI@WAVE with either a machine or a robot. In this configuration all the welding expertise of the DIGI@WAVE can be fully exploited and parameter adjustment or program selection requires the operator to intervene on the machine front panel. DV 500 CDR standard manual wire feeder can be used on a machine but the automatic DV-R 400 wire feeder is recommended especially for robots. This configuration is recommended when welding large series of parts with no change in welding parameters.



Auto A1 with DV-R 400 automatic wire feeder in a robotic cell

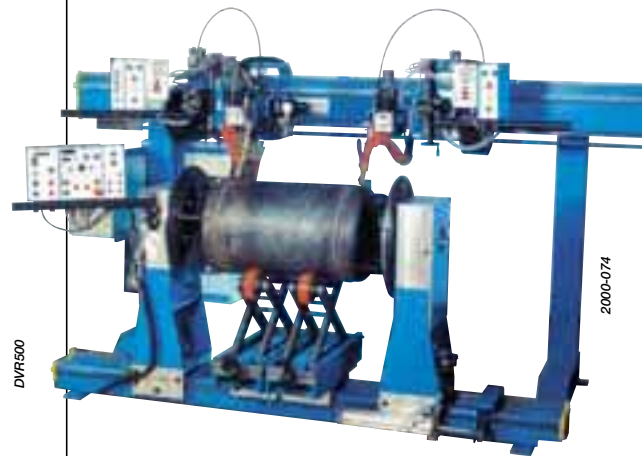
Automation A2

A2 automation level enables a DIGI@WAVE with AUTO-CARD option to be interfaced to a robot or an automatic machine. The welding process is then controlled by input signals or by call on and chaining of any of the 100 programs. This configuration requires an automatic DV-R 500 wire feeder for most uses or DV-R 600 HD for heavy duty applications. The PC-TOOL option allows data downloading or saving on USB keys or directly onto a laptop PC, and the data can then be managed with WELDSOFT software.

DIGI@WAVE machines 400 - 500



**DV-R 500
automatic wire feeder**



**Auto A2 and automatic DV-R 500
wire feeder on an automatic
machine**

With the AUTO-CARD option, DIGI@WAVE can be connected to any machine or robot. The welding process is then controlled by input signals or by call on and chaining of any of the 100 programs memorised in DIGI@WAVE.

A specific synchronisation mode allows complete control of the entire welding cycle. An automatic DV-R 500 wire feeder for most uses or DV-R 600 HD for heavy duty applications is mandatory to operate DIGI@WAVE in this configuration.

Features AUTO A2

- 100 programs and storing on USB key or laptop
- Process control mode
- Options easily connectable

* Saving on USB key / PC with PC-TOOL

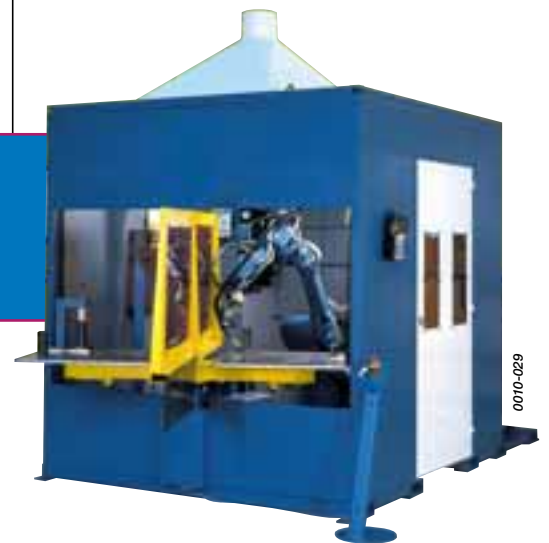
PC-TOOL and WELDSOFT options



With the PC-TOOLS option, which is available only with both A2 and A3 automation levels, the operator can save the welding data or programs on a USB key and on a laptop PC or print them on any printer.



WELDSOFT software will enable the management of all data transferred to a laptop PC (welding parameters, welding programs, process control or maintenance)



**Auto A2 and DV-R 500
automatic heavy duty wire feeder
in a robotic cell.**

Automation A3

A3 automation level operates with both AUTO-CARD and AUTO-BUS options. It allows a DIGI@WAVE to be connected to a robot equipped with a bus connection. With AUTO-BUS, the level of control on the process by the robot may be selected, locked or open, which will satisfy most requirements. An automatic DV-R 500 wire feeder is used for the majority of applications or a DV-R 600 HD for heavy duty applications is mandatory to operate DIGI@WAVE in this configuration. Using more than one DIGI@WAVE, networking is possible with the WELDSOFT and PC-TOOL options.

DIGI@WAVE machines 400 - 500



**DV-R 600 HD
automatic wire feeder**



**Auto A3 and DV-R 600 HD wire
feeder with bus communication**

With options AUTO-CARD and AUTO-BUS, DIGI@WAVE can be connected to any robot equipped with a bus. This type of link will allow optimized communications between DIGI@WAVE and your robot. Beyond the simplicity of wiring, bus communications standardise information flows between various installations in conformance with the most recent industrial norms. An automatic DV-R 500 wire feeder can be used for most applications and the DV-R 600 HD for heavy duty applications is mandatory for the operation of DIGI@WAVE in this configuration.

Advantages AUTO A3

- Bus communication with advanced transmission protocol
- Heavy duty automatic DV-R 600 HD wire feeder
- Multiplexing unit to manage additional specific peripheral equipment

JOBMATIC and MUXAL options



The remote control JOBMATIC is especially designed to develop programs on automatic or robotic welding cells.



The MUXAL box options available for both A2 and A3 automation levels and is used to manage additional peripheral equipment. With specific functions such as contact tip control changes, torch cleaning devices, etc... it also allows retrofit to an older installation using DIGI@WAVE.

Network option

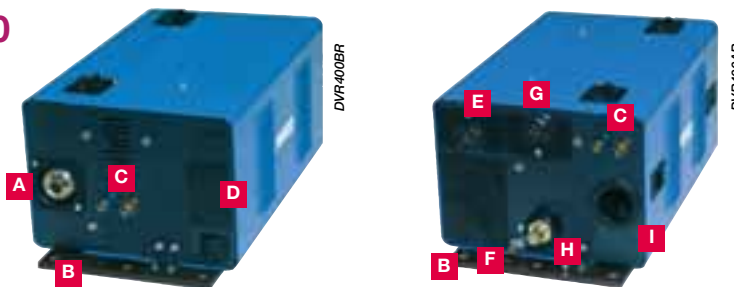


Networking of DIGI@WAVE machines allows downloading or storing of welding programs onto a server.

Automatic wire feeders

A specific range of automatic wire feeders range has been developed for both DIGI@PULS and DIGI@WAVE welding machines. These wire feeders represent the perfect solution for any requirement, either for a simple automatic machine or for a heavy duty robotic welding environment.

DV-R 400

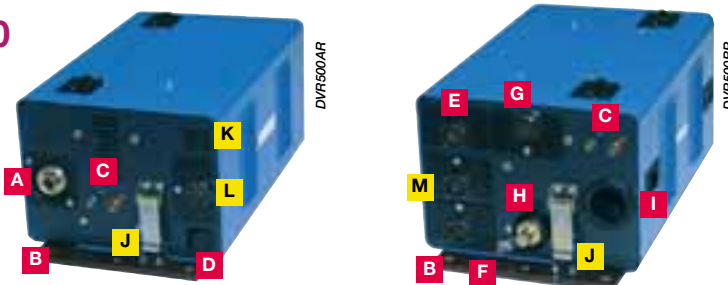


This wire feeder is to be used only with DIGI@PULS machines. Compact it can be fitted on automatic machines or robots. Opening the side panel allows easy access to the wire feed mechanism. The assembly is fitted on an isolating bakelite support.

- A** Torch connection
- B** Bakelite isolating support
- C** Cooling fluid connection
- D** Wire advance
- E** Input signals
- F** Gas connector
- G** Harness connector
- H** Power plug
- I** Welding wire in
- J** Quick connector
- K** Welding wire backward
- L** Plug for options
- M** Peripheral equipment plugs

Specific functionalities:
DV-R 500 and DV-R 600 HD

DV-R 500



The automatic DV-R 500 wire feeder is used exclusively on a DIGI@WAVE machine. As compact as the DV-R 400 model, it is also equipped with a quick connection device for easy removal and maintenance. Opening the side panel allows easy access to the wire feed mechanism and the reversing mounting feature increases configuration flexibility. The DV-R 500 is equipped with additional plugs to simplify connections and pre-configuration to receive both wire retract and push-pull options.

DV-R 600 HD

The high level torque motor, and roller on bearings, mean that the automatic heavy duty DV-R 600 HD wire feeder will accommodate the most intensive welding applications. It has all the functionality of the DV-R 500 model.



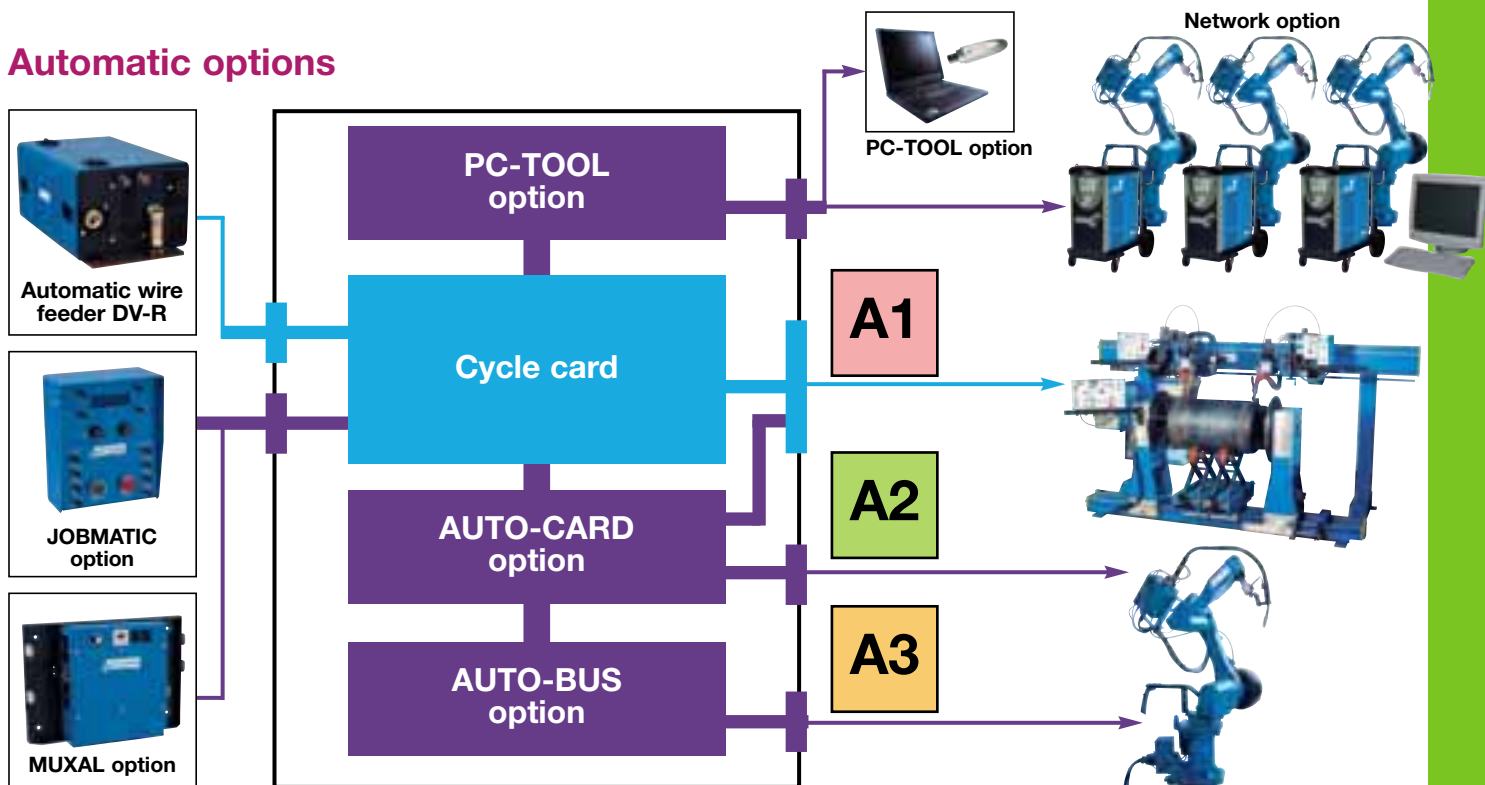
To order

Manual wire feeder DV 400 CDR	W 000 055 082
Automatic wire feeder DV-R 400	W 000 055 084
Manual wire feeder DV 500 CDR	W 000 055 083
Automatic wire feeder DV-R 500	W 000 055 087
Automatic wire feeder DV-R 600 HD	W 000 055 068
Manual remote control box RC-JOB	W 000 055 077
Automatic remote control box JOBMATIC	Consult us
Automatic Card AUTO-CARD	W 000 055 024
Bus card AUTO-BUS	W 000 055 029
PC-TOOL option	W 000 055 041
PC WELDSOFT software	W 000 055 043
Multi-option box MUXAL	W 000 055 037
Card TOPMAG-CARD	W 000 055 033
Card CARD-PLUG	W 000 055 040
Automatic push pull card PP-CARD	W 000 055 056

Automation process

DIGI@WAVE welding machine architecture has been conceived to allow the integration of all automatic features. None of the options is necessary to operate the machine with the A1 automation level, and A2 and A3 options will upgrade your machine with advanced communication and automation features when needed.

Automatic options



	DIGI@WAVE												DIGI@PULS				
	280	400						500				320	420				
Automation level	A1	A1	A1	A2	A2	A3	A3	A1	A1	A2	A2	A3	A3	A1	A1	A1	A1
Manual wire feeder DV 400 CDR															●		●
Automatic wire feeder DV-R 400														●		●	
Manual wire feeder DV 500 CDR			●						●								
Automatic wire feeder DV-R 600 HD		●		●		●		●			●		●				
Automatic wire feeder DV-R 600 HD					●		●			●		●					
Automatic remote control JOBMATIC	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Automatic Card AUTO-CARD				●	●	●	●			●	●	●	●				
Bus card AUTO-BUS						●	●					●	●				
PC-TOOL option				■	■	■	■			■	■	■	■				
PC WELDSOFT software				■	■	■	■			■	■	■	■				

Recommended configuration

● Necessary equipment for installation

■ Optional equipment



Contacts

AIR LIQUIDE WELDING LTD
Low March - London Road
Daventry - Northants NN 11 4 SD
United Kingdom
Tél.: +44 1 327 705511
Fax: +44 1 327 701310
Fax : + 33 1 34 21 31 30

For other countries, contact our export departments

ALW Export Department Italy

Via Torricelli15/A
37135 Verona - Italy
Tel: +39 045 82 91 511
Fax: +39 045 82 91 536
E mail: export@fro.it

ALW Export Department France

13, rue d'Epluches - BP 70024 Saint Ouen l'Aumône
95315 Cergy-Pontoise Cedex - France
Tel: +33 1 34 21 33 33
Fax: +33 1 30 37 19 73
E mail: info.saf@airliquide.com

www.saf-airliquide.com



Founded in 1902 and now present in 70 countries with 35,900 employees, Air Liquide is the world leader in industrial and medical gases and related services. The Group offers innovative solutions based on constantly enhanced technologies to help manufacture many indispensable everyday products and preserve life.

SAF-FRO reserves the right to modify its equipment without prior notice.
The illustrations, descriptions and characteristics are provided for information purposes only and are not binding on the manufacturer.

© SAF-FRO
W 000 262 757 - 06 02 S 01 Ed. 1
QB : 2225
Photos : JSR - François - Guérard